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Title: HIGH PERFORMANCE CAPACITOR

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IN THE CLAIMS

A listing of the pending claims is shown below. Claims 15, 16, and 18 are currently amended and new claims 30-40 are added.

1-12. (Cancelled)

- 13. (Original) A system comprising:
 - a die including an electronic system;
- a capacitor located less than about .1 millimeter from the die and coupled to the die, the capacitor is capable of decoupling a power supply connection at the die without additional capacitors located external to the die; and
 - a dielectric layer located between the capacitor and the die.
- 14. (Original) The system of claim 13, wherein the dielectric layer has a thickness of between about .05 millimeters and about .1 millimeters.
- 15. (Currently Amended) A system comprising:
 - a first die;
 - a second die; and
- a capacitor <u>including a plurality of plated through holes coupling at least four conductive layers embedded in a dielectric to a plurality of connection cites and having a first surface having a controlled collapse chip connection coupled to the first die and a second surface having a controlled collapse chip connection coupled to the second die.</u>

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16. (Currently Amended) A system comprising:

a first die;

a second die; and

a capacitor having a first surface having a controlled collapse chip connection coupled to the first die and a second surface having a controlled collapse chip connection coupled to the second die, The system of claim 15, wherein the first die includes a processor and the second die includes a communication system.

- 17. (Canceled)
- 18. (Currently Amended) A system comprising:
 - a substrate having a first surface and a second surface;
 - a die coupled to the first surface; and
- a capacitor having a plurality of vias plated through holes coupled to a plurality of conductive layers in the capacitor, the capacitor is coupled to the second surface by a controlled collapse chip connection and the capacitor is electrically coupled to the die through the substrate.
- 19. (Original) The system of claim 18, wherein the die includes a processor.
- 20. (Original) The system of claim 19, wherein the die has a die surface and the capacitor has a capacitor surface and the capacitor surface is located less than about .1 millimeter from the die surface.
- 21. (Original) A system comprising:
 - a processor requiring at least 5 watts of power to be operable; and
- a single multilayered single package capacitor coupled to the processor and capable of decoupling a power supply from the processor.

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22. (Original) The system of claim 21, wherein the single multilayered single package capacitor is capable of being mounted on a substrate by a plurality of solder

bumps.

23. (Original) The system of claim 22, wherein the single multilayered capacitor is capable of being mounted on a substrate using a controlled collapse chip connection.

24-29. (Cancelled)

- 30. (New) The system of claim 13, wherein the capacitor comprises palladium.
- 31. (New) The system of claim 30, wherein the capacitor comprises barium titanate.
- 32. (New) The system of claim 31, wherein the barium titanate is formed from sheets having a thickness of between about five and about seven microns.
- 33. (New) The system of claim 15, wherein the at least four conductive layers comprise platinum.
- 34. (New) The system of claim 33, wherein the first die comprises silicon.
- 35. (New) The system of claim 16, wherein the capacitor comprises a plurality of dielectric sheets having at least two different thicknesses.
- 36. (New) The system of claim 35, wherein the first die and the second die comprise silicon.

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(New) The system of claim 18, wherein the capacitor includes a high voltage site 37. surrounded by four low voltage sites.

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- 38. (New) The system of claim 37, wherein each of the plurality of conductive layers comprises palladium.
- 39. (New) The system of claim 21, wherein the single multilayered single package capacitor comprises barium titanate.
- 40. (New) The system of claim 39, wherein the single multilayered single package capacitor comprises platinum.